



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	:	PATENT
	:	
Michael SMOLONG et al.	:	
	:	
Serial No.: 10/544,222	:	Art Unit: 3657
	:	
Filed: August 2, 2005	:	Examiner: T. W. Irvin
	:	
For: LUBRICATING DEVICE	:	Appeal No. _____

BRIEF ON APPEAL

Mark S. Bicks, Esquire
Roylance, Abrams, Berdo & Goodman, LLP
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

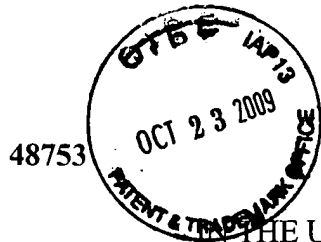
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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. §41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

For the appeal to the Board of Patent Appeals and Interferences from the decision dated June 3, 2009 of the Primary Examiner twice and finally rejecting claims 11-21 in connection with the above-identified application, Applicants-Appellants submit the following brief in accordance with 37 CFR §41.37.

1. Real Party in Interest

The inventors, Michael Smolong, Roland Herber and Armin Schmidt, assigned their entire rights, titles and interests in the patent application to Hydac Filtertechnik GmbH of Sulzbach/Saar, Germany.

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2. Related Appeals and Interferences

There are no other related appeals or interferences known to Appellants, Appellants' legal representative, or assignees, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

3. Status of Claims

Claims 1-10 are cancelled. Claims 11-21 are pending, are rejected, and are on appeal.

4. Status of Amendments

Subsequent to the June 3, 2009 Office Action containing the final rejection, no Response or Amendment was filed.

5. Summary of Claimed Subject Matter

Sole independent claim 11 covers a lubricating device comprising first and second gear stages 16 and 18, a lubricant circuit 20 and an immersion bath 28 (p. 4, line 4 – p. 5, line 8; p. 5, lines 16-18; Fig. 1). The gear stages 16, 18 are mounted next to one another and are dynamically connected to one another (p. 5, lines 1-4; Fig. 1). The lubricant circuit 20 has at least one filter 26, a lubricant supply 38 for providing lubricant to the first gear stage 16, and a lubricant outlet 40 for removing lubricant from the second gear stage 18 (p. 5, lines 4-23; Fig. 1). Circulating lubricant is drawn from the lubricant outlet 40 to the filter 26 for cleaning, and is then conveyed to the lubricant supply 38 (p. 5, lines 9-11; p. 7, lines 3-6; Fig. 1). The immersion bath 28 receives individually and at least partially each of the two gear stages 16, 18 for the gear stages to pass through the immersion bath 28 for splash lubrication of the gear stages (p. 5, lines 16-18; Fig. 1). The immersion bath 28 has a lubricant reserve and a subdivision 30 separating the

immersion bath 28 into first and second bath areas 32 and 34 for the first and second gear stages, respectively (p. 5, lines 18-20; Fig. 1). The subdivision 30 has a configuration and the lubricant reserve has an amount such that the lubricant overflows the subdivision to be conveyed from the first bath area 32 to the second bath area 34 (p. 5, lines 19-23; Fig. 1). The first bath area 32 has the lubricant supply 38, while the second bath area 34 has the lubricant outlet 40 (p. 5, lines 19-23; Fig. 1).

By forming the lubricating device in this manner, a good flow of the lubricant is provided throughout the entire device, avoiding stagnation areas of lubricant. The lubricant is distributed onto the first gear stage 16 and collects in the first bath 32. Fluid overflowing the subdivision 30 enters the second bath 34 for lubricating the second gear stage 18. The lubricant in the second bath 18 is then withdrawn from the immersion bath 28 via outlet 40 and is conveyed by pump 22 through the filter 26 and then back to the lubricant supply 38.

6. Grounds for Rejection to be Reviewed Upon Appeal

Claims 11 and 14-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,279,391 to Ward in view of U.S. Patent No. 4,420,990 to Hauser.

Claims 17-21 stand rejected under 35 U.S.C. §103 as being unpatentable over the Ward and Hauser patents when further considered in view of U.S. Patent Pub. No. US2004/0074827 to Sann.

Claims 11-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,607,464 to Bauer in view of the Ward and Hauser patents.

Claims 17-21 stand rejected under 35 U.S.C. §103 as being unpatentable over the Bauer, Ward and Hauser patents in view of the Sann publication.

7. Arguments

A. Rejections Under 35 U.S.C. §103 over Ward and Hauser Patents

(1) The Rejections

Claims 11 and 14-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,279,391 to Ward in view of U.S. Patent No. 4,420,990 to Hauser. The Ward patent is cited as disclosing a lubricating device having gear stages mounted adjacent one another and dynamically connected. A lubricant circuit is allegedly provided with a filter 48, a lubricant supply 51 supplying lubricant to the first gear stage, a lubricant inlet 46 for removing lubricant from the second gear stage and circulating lubricant from lubricant outlet to the filter. Reservoir 40 is interpreted as an immersion bath. The Hauser patent is cited for a filler 18 inside a transmission casing 11 separating gears A,B,C. In support of the rejection, it is alleged that it would be obvious to provide the Hauser transmission filler in the Ward transmission to occupy space in the transmission between the gears and housing 11 in a manner that would occupy most of the space between the gears and the housing and create an individual immersion bath for each gear stage. Relative to claims 14 and 15, the Ward patent allegedly discloses a suction device, a motor pump 44, and an injection device, and a nozzle 51 mounted diagonally opposite one another in the upper and lower areas of the transmission housing. Relative to claim 16, the Ward filter unit is allegedly mounted between the pump unit 44 and gear housing 12.

(2) Claim 11 is Patentably Distinguishable over the Ward and Hauser Patents

Claim 11 is patentably distinguishable over the Ward and Hauser patents considered individually or in any obvious combination thereof by the combination of the separate immersion bath areas for the separate gear stages in combination with the specific lubricant flow, including

the overflow over the subdivision 30. The Ward and Hauser patents fail to disclose or render such structure obvious, particularly by the failure of Ward gears 22, 26, 28, 30, 32 and 34 to pass through immersion bath sections and of the Hauser filler to have overflow between its various sections. Mere addition of the Hauser filler in the Ward housing will not necessarily or inherently result in the immersion of separate gear stages in separate bath areas and in the overflow of the subdivision between those bath areas, as claimed.

The Ward patent discloses a dry sump mechanical transmission where only the gear 56 is immersed within lubricant 42 within lubricant reservoir 40. None of the other gears 22, 26, 28, 30, 32 and 34 are disclosed as being immersed. Thus, the Ward patent does not teach multiple gear stages immersed in separate immersion bath areas. Particularly, the Ward patent only discloses a single bath area provided by reservoir 40, and separating the other gears 22, 26, 28, 30, 32 and 34 from that single bath in housing 12 such that they are not immersed in that single bath (reservoir 40).

Such deficiencies in the Ward patent are not satisfied by any of the other cited patents, particularly the Hauser patent. The Hauser patent discloses a transmission having a filler 18 to occupy most of the space of the transmission between the gears A-G in housing 11 to reduce the amount of lubricant immersing the transmission gears (col. 2, lines 20-26). The Hauser patent fails to disclose any flow of the lubricant from outside of the housing, through the housing and then to outside the housing, or even between the various pre-selected locations 27. Specifically, there is no disclosure of overflow between the walls separating the locations 27 in the Hauser patent. Hauser cannot teach or render obvious the addition of a feature to the Ward transmission that the Hauser patent does not disclose or inherently provide.

Even if it is assumed for the sake of argument only to be obvious to add the teaching (filler 18) of the Hauser patent to the Ward reservoir, such combination would only provide a filler 18 within reservoir 42 about gear 56 and not about gears 22, 24, 26, 28, 30, 32 and 34. One of ordinary skill in the art would not find providing the Hauser filler in the cavity 11 of housing 12 about gears 22, 24, 26, 28, 30, 32 and 34 of the Ward transmission obvious since that Ward cavity does not have an immersion bath for those gears. The Hauser patent, at best, only teaches providing its filler about gears immersed in a lubricant, as noted above. The combination would not teach providing first and second baths for first and second gear stages, respectively, separated by a subdivision 30, since neither cited patent discloses that claimed arrangement with the claimed lubricant supply and outlet. Additionally, the proposed combination would not possess the claimed subdivision configuration and lubricant amount such that the claimed overflow would occur, again since neither cited patent discloses such overflow. The Examiner's beliefs presented in the third paragraph on page 6 of the final rejection that the claimed structural features creating the separate immersion baths and the overflow are mere conclusions, unsupported by any evidence or analysis of evidence in the record of this application.

When no reference discloses a feature of a claim relied on to distinguish the prior art, there can be no suggestion to modify the prior art to contain the feature. In re Civitello, 339 F.2d 243, 144 USPQ 10 (C.C.P.A. 1964). As stated in W. L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 220 USPQ 303, 311 (Fed. Cir. 1983), there must be something in the teachings of the cited patents to suggest or to provide a reason to one skilled in the art that the claimed invention would be obvious.

Despite the simple concept of the invention, the Examiner has the burden of finding "the specific understanding or principle within the knowledge of a skilled artisan that would have

motivated one with no knowledge of [the] invention to make the combination in the manner claimed.” See In re Werner Kotzab, 217 F.3d 1365, 1371, 55 USPQ 2d 1313, 1318 (Fed. Cir. 2000). Here, the necessary factual findings are missing, rendering the rejection untenable.

The Examiner, in this situation has not pointed to any specific principle or motivation in the prior art that would lead one skilled in the art to arrive at the invention as claimed. “[P]articular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.” In re Werner Kotzab, 217 F.3d at 1371, 55 USPQ 2d at 1318. If no particular finding can be made as to the reason one skilled in the art would have used the Hauser filler 18 in the Ward transmission to produce the claimed invention, the Examiner cannot properly hold the claimed invention obvious. The mere broad allegations regarding the use of the Hauser filler in the Ward transmission does not show that the specifically claimed lubricating device is obvious or results.

The Examiner is using the Examiner’s knowledge of the invention, in hindsight, to conclude improperly that one skilled in the art would have found it obvious to make the proposed combinations and modifications. However, such “hindsight reconstruction” is impermissible in reaching a finding of obviousness. See, e.g., W. L. Gore & Assocs., Inc., v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983).

Thus, the subject matter of claim 11 is not rendered unpatentable by the Ward patent, the Hauser patent, or any obvious combination thereof.

(3) Dependent Claims 14-16

Claims 14-16 being dependent upon claim 11, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

(a) Claim 14

Claim 14 is further distinguished by the suction device and the injection device being located diagonally opposite each another. Such diagonal orientation is not provided and is not shown to be provided in the Ward patent, as alleged, particularly within the overall claimed combination.

(b) Claim 15

Claim 15 is further distinguished by the motor pump unit, particularly in combination with the immersion bath for multiple gear stages, overflow structure, inlet and outlet, as claimed.

(c) Claim 16

Claim 16 is further distinguished by the filter mounting in combination with the immersion bath for multiple gear stages, overflow structure, inlet and outlet, as claimed.

B. Rejections Under 35 U.S.C. §103 Over
Ward and Hauser Patents and Sann Publication

(1) The Rejections

Claims 17-21 stand rejected under 35 U.S.C. §103 as being unpatentable over the Ward and Hauser patents when further considered in view of U.S. Patent Pub. No. US2004/0074827 to Sann. The Sann publication is cited for a filter unit having a first fine filter 12, a bypass 22 and a coarse filter 32 connected in series with the first filter and the fineness of the coarse filter being 5

to 10 times greater than the fine filter. In support of the rejection, it is alleged that it would be obvious to use the Sann filter in the Ward system.

(2) Claims 17-21 are Patentable

Claims 17-21 being dependent upon claim 11, are also allowable over the Ward and Hauser patents and the Sann publication for the above reasons since the Sann publication does not supply any of the noted deficiencies in the Ward and Hauser patents. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claims 17-21 are further distinguished by the particular filter construction used in combination with the claimed lubricating device. Although such filter structure is disclosed in the cited Sann publication, it does not disclose the use of that filter within the particularly claimed lubricating device.

C. Rejections Under 35 U.S.C. §103 Over Bauer, Ward and Hauser Patents

(1) The Rejections

Claims 11-16 also stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,607,464 to Bauer in view of the Ward and Hauser patents. The Bauer patent is cited for a wind power station having planetary and spur gears 5, 9 mounted next to and dynamically connected to one another in a casing 1, but without a lubrication circuit. The Ward patent is cited for a gearing unit 10 with a lubricating circuit having a filter 48, a lubricant supply 51 providing lubricant to first gear stage 34, a lubricant inlet 46 removing lubricant from a second gear stage 24 and circulating lubricant from the inlet to the filter and then to the lubricant supply. In support of the rejection, it is alleged that it would be obvious to add the Ward lubricant circuit and filter to the gearing of the Bauer power station unit. The Hauser patent is cited relative to

filler 18 which is contended would be obvious to add to the Bauer unit after being modified in view of the Ward patent as alleged above, creating an individual immersion bath for each stage.

(2) Claim 11 is Patentably Distinguishable
Over the Bauer, Ward and Hauser Patents

The rejection over the Bauer, Ward and Hauser patents suffers from the same deficiencies discussed above relative the rejection over the Ward and Hauser patents. The arguments presented above relative to the Ward and Hauser patents are incorporated herein by reference. The Bauer patent is merely cited for a wind power station having two gear stages 5 and 9 mounted next to and dynamically connected to one another. Admittedly, the Bauer patent fails to disclose any lubrication circuit. To provide the claim 11 limitations of the lubrication circuit and immersion bath, the Ward and Hauser patents are interpreted and combined in the same manner as applied for the rejection over the Ward and Hauser patent, without the Bauer patent. The same arguments presented above apply, demonstrate that this three patent combination is untenable, and are not repeated to avoid burdening the record in this application.

Moreover, the proposed combination involves modifying the Bauer transmission by adding the Ward lubrication system and then modifying the added Ward lubrication system to add the Hauser filler. Such modification (by the Hauser patent) of a modifying reference (the Ward patent) is a well accepted indication of non-obviousness.

Accordingly, claim 11 is patentably distinguishable over these cited patents.

D. Rejections Under 35 U.S.C. §103 Over Bauer,
Ward and Hauser Patents and Sann Publication

(1) The Rejections

Claims 17-21 also stand rejected under 35 U.S.C. §103 as being unpatentable over the Bauer, Ward and Hauser patents in view of the Sann publication. The Sann publication is again relied upon relative to the filter features.

(2) Claims 17-21 are Patentable

Claims 17-21 being dependent upon claim 11, are also allowable over the Ward and Hauser patents and the Sann publication for the above reasons since the Sann publication does not supply any of the noted deficiencies in the Bauer, Ward and Hauser patents. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claims 17-21 are further distinguished by the particular filter construction used in combination with the claimed lubricating device. Although such filter structure is disclosed in the cited Sann publication, it does not disclose the use of that filter within the particularly claimed lubricating device.

8. Conclusion

In view of the foregoing, the rejections of claims 11-21 under 35 U.S.C. §103 are untenable, and a decision reversing those rejections requested.

Respectfully submitted,



Mark S. Bicks
Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, LLP
1300 19th Street, NW, Suite 600
Washington, DC 20036
(202) 659-9076

Dated: October 23, 2009

APPENDIX A – COPY OF CLAIMS ON APPEAL

11. A lubricating device, comprising:

first and second gear stages mounted next to one another and dynamically connected to one another;

a lubricant circuit having at least one filter therein, having a lubricant supply for providing lubricant to said first gear stage, having a lubricant outlet for removing lubricant from said second gear stage, and circulating lubricant drawn from said lubricant outlet to said filter for cleaning and then to said lubricant supply; and

an immersion bath receiving individually and at least partially each of said gear stages for said gear stages to pass through said immersion bath for splash lubrication of said gear stages, said immersion bath having a lubricant reserve and a subdivision separating said immersion bath into first and second bath areas for said first and second gear stages, respectively, said subdivision having a configuration and said lubricant reserve having an amount such that lubricant overflows said subdivision to be conveyed from said first bath area to said second bath area, said first bath area having said lubricant supply, said second bath area having said lubricant outlet.

12. A lubricating device according to claim 11 wherein

said first and second gear stages are parts of a wind power station.

13. A lubricating device according to claim 11 wherein

said gear stage comprises a planet gear; and

said second gear stage comprises a spur gear.

14. A lubricating device according to claim 11 wherein

said lubricant outlet comprises a suction device;

said lubricant supply comprises an injection device; and

said first and second gear stages are mounted in a gear housing with said injection device and said suction device being located diagonally opposite one another in an upper area and a lower area, respectively, of said housing.

15. A lubricating device according to claim 14 wherein

said lubricant circuit comprises a motor pump unit conveying lubricant through said injection device, said suction device and said filter.

16. A lubricating device according to claim 15 wherein

said filter is mounted between said motor pump unit and said gear housing in said lubricant circuit.

17. A lubricating device according to claim 11 wherein

said filter comprises a fine filter element safeguarded by a bypass and a coarse filter element connected in series to said fine filter element downstream in a direction of fluid flow through said filter.

18. A lubricating device according to claim 17 where

said coarse filter has a filter fineness approximately five to ten times greater than a filter fineness of said fine filter element.

19. A lubricating device according to claim 11 wherein said filter comprises:

a filter housing having a longitudinal axis, having a housing wall coaxial to said longitudinal axis, and having a fluid inlet and a fluid outlet defining a flow direction therein, said fluid inlet extending laterally through said housing wall;

a first filter element within said filter housing extending along said longitudinal axis and having a first length essentially along an entire length of said filter housing;

a bypass device within said filter housing openable to allow flow in said flow direction without filtration through said first filter element; and

a second filter element within said filter housing and said first filter element downstream of said first filter element in said flow direction having a second length not greater than one-half of said first length, said second filter element having a top end cap lying essentially in one plane extending transversely to said longitudinal axis with a top end of said fluid inlet, said first filter element having a first end adjacent to and encompassing said bypass device and an opposite

second end adjacent to and encompassing said second filter element with a radial distance therebetween, said second filter element having an end opposite said top end cap supported on a plate holder closing said fluid outlet except for a passage in said plate holder.

20. A lubricating device according to claim 11 wherein said filter comprises:

a filter housing having a longitudinal axis and having a fluid inlet and a fluid outlet defining a flow direction therein, said fluid inlet extending laterally through said filter housing;

a first filter element within said filter housing extending along said longitudinal axis and having a first length essentially along an entire length of said filter housing;

a second filter element within said filter housing and said first filter element downstream of said first filter element in said flow direction having a second length not greater than one-half of said first length, said second filter element having a top end cap lying essentially in one plane extending transversely to said longitudinal axis with a top end of said fluid inlet; and

a bypass device within said filter housing openable to allow flow in said flow direction without filtration through said first filter element, said bypass device being a bypass valve having a closing part movable between open and closed positions opening and closing a flow path from said fluid inlet to said second filter element without passing through said first filter element, respectively, and biased towards said closed position by a spring.

21. A lubricating device according to claim 11 wherein said filter comprises:

a filter housing having a longitudinal axis, having a housing wall coaxial to said longitudinal axis, and having a fluid inlet and a fluid outlet defining a flow direction therein, said fluid inlet extending laterally through said housing wall;

a first filter element within said filter housing extending along said longitudinal axis and having a first length essentially along an entire length of said filter housing;

a bypass device within said filter housing openable to allow flow in said flow direction without filtration through said first filter element; and

a second filter element within said filter housing and said first filter element downstream of said first filter element in said flow direction having a second length not greater than one-half of said first length, said second filter element having a top end cap lying essentially in one plane extending transversely to said longitudinal axis with a top end of said fluid inlet, said bypass device being a bypass valve having a closing part movable between open and closed positions opening and closing a flow path from said fluid inlet to said second filter element without passing through said first filter element, respectively, and biased towards said closed position by a spring.

APPENDIX B - EVIDENCE

None.

APPENDIX C – RELATED PROCEEDINGS

None.